

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

This listing of claims will replace all prior versions, and listings, of all claims in the application.

LISTING OF THE CLAIMS

Claims 1 – 16. (Cancelled).

Claim 17. (Currently amended) The device according to claim 35 [[15]], wherein first regenerant fluid vessels (V_{RS1}) for holding regenerant fluid intended for the regenerations of the main cation exchangers (I_X) are further provided, said vessels being coupled to the main cation exchangers (I_X).

Claim 18. (Currently amended) The device according to claim 35 [[15]], wherein service reservoirs (V_{ZK}) for holding concentrate fluid are further provided, said reservoirs being coupled to the collecting tanks (V_K) and to the main cation exchangers (I_X).

Claim 19. (Currently amended) The device according to claim 35 [[15]], wherein safety cation exchangers (I_S) are further provided, said exchangers being coupled to the main cation exchangers (I_S) are further provided, said exchangers being coupled to the main cation exchangers (I_X) for post-treatment of the concentrate fluid treated in the main cation exchangers (I_X).

Claim 20. (Currently amended) The device according to claim 35 [[15]], wherein second regenerant fluid vessels (V_{RS2}) for holding regenerant fluid intended for the regeneration of the safety cation exchangers (I_S) are provided.

Claim 21 and 22. (Cancelled).

Claim 23. (Currently amended) The method according to claim 36 [[21]], wherein, for regenerating the main cation exchangers (I_x), concentrate fluid contained in the main cation exchangers (I_x) is displaced by a regenerant fluid and is recirculated back into the collecting tanks (V_K), the main cation exchangers (I_x) being regenerated in the process.

Claim 24. (Previously presented) The method according to claim 23, wherein the regenerant fluid is drawn from first regenerant fluid vessels (V_{RS1}) and is transferred to the main cation exchangers (I_x).

Claim 25. (Previously presented) The method according to claim 23, wherein the regenerant fluid is displaced by the concentrate fluid after regeneration of the main cation exchangers (I_x) is complete, the regenerant fluid being recirculated back into first regenerant fluid vessels (V_{RS1}).

Claim 26. (Currently amended) The method according to claim 36 [[21]], wherein concentrate fluid flows through several main cation exchangers (I_x) at different times with the regenerant fluid being circulated through those main cation exchangers (I_x) through which the concentrate fluid is not circulating for regeneration thereof.

Claim 27. (Currently amended) The device according to claim 35 [[16]], wherein first regenerant fluid vessels (V_{RS1}) for holding regenerant fluid intended for the regenerations of the main cation exchangers (I_x) are further provided, said vessels being coupled to the main cation exchangers (I_x).

Claim 28. (Currently amended) The device according to claim 35 [[16]], wherein service reservoirs (V_{ZK}) for holding concentrate fluid are further provided, said reservoirs being coupled to the collecting tanks (V_K) and to the main cation exchangers (I_x).

Claim 29. (Currently amended) The device according to claim 35 [[16]], wherein safety cation exchangers (I_S) are further provided, said exchangers being coupled to the main cation exchangers (I_S) are further provided, said exchangers being coupled to the main cation exchangers (I_X) for post-treatment of the concentrate fluid treated in the main cation exchangers (I_X).

Claim 30. (Currently amended) The device according to claim 35 [[16]], wherein second regenerant fluid vessels (V_{RS2}) for holding regenerant fluid intended for the regeneration of the safety cation exchangers (I_S) are provided.

Claim 31. (Currently amended) The method according to claim 36 [[22]], wherein, for regenerating the main cation exchangers (I_X), concentrate fluid contained in the main cation exchangers (I_X) is displaced by a regenerant fluid and is recirculated back into the collecting tanks (V_K), the main cation exchangers (I_X) being regenerated in the process.

Claim 32. (Previously presented) The method according to claim 24, wherein the regenerant fluid is displaced by the concentrate fluid after regeneration of the main cation exchangers (I_X) is complete, the regenerant fluid being recirculated back into first regenerant fluid vessels (V_{RS1}).

Claim 33. (Previously presented) The method according to claim 23, wherein concentrate fluid flows through several main cation exchangers (I_X) at different times with the regenerant fluid being circulated through those main cation exchangers (I_X) through which the concentrate fluid is not circulating for regeneration thereof.

Claim 34. (Previously presented) The method according to claim 24, wherein concentrate fluid flows through several main cation exchangers (I_X) at different times with the

regenerant fluid being circulated through those main cation exchangers (I_x) through which the concentrate fluid is not circulating for regeneration thereof.

Claim 35. (Currently amended) A device for regenerating an electroless metal plating bath, comprising:

a) electrodialysis arrangements (E1, E2), each having diluate compartments (Di1y, Di2y) for holding the metal plating bath, concentrate compartments (Ko1y, Ko2y) that are separated from the diluate compartments (Di1y, Di2y) through ion exchange membranes and are intended to hold a concentrate fluid serving to adsorb interfering substances that are to be removed from the metal plating bath as well as anodes (An) and cathodes (Ka), and

b) main cation exchangers (I_x) for removing metal ions from the concentrate fluid, said cation exchangers being coupled to the concentrate compartments (Ko1y, Ko2y) in such a manner that the concentrate fluid is allowed to be conducted through the main cation exchangers (I_x) and to be recirculated back into the concentrate compartments (Ko1y, Ko2y) by allowing the fluid to be circulated in a first circuit between the concentrate compartments (Ko1y, Ko2y) and collecting tanks (V_k) and in a second circuit between the collecting tanks (V_k) and the main cation exchangers (I_x);

c) wherein said electrodialysis arrangements include:

i) a first electrodialysis arrangement (E1) having alternating concentrate compartments (Ko1y) and diluate compartments (Di1y) as well as cathodes (Ka) and anodes (An), the diluate compartments (Di1y) being each separated on the cathode side thereof from a neighboring concentrate compartment (Ko1y) by a monoselective cation exchange membrane (KS) and on the anode side thereof from a neighboring concentrate compartment (Ko1y) by an anion exchange membrane (A), and

ii) a second electro dialysis arrangement (E2) having alternating diluate compartments (Di2y) and concentrate compartments (Ko2y) as well as cathodes (Ka) and anodes (An), the concentrate compartments (Ko2y) being each separated on the cathode side thereof from a neighboring diluate compartment (Di2y) by anion exchange membrane (A) and on the anode side thereof from a neighboring diluate compartment (Di2y) by a monoselective anion exchange membrane (AS),

so that the metal plating bath can be conducted simultaneously through all of the diluate compartments (Di1y, Di2y) in the two electro dialysis arrangements (E1, E2), the arrangements being connected in parallel, and the concentrate fluid being conducted through all of the concentrate compartments (Ko1y, Ko2y) in the two electro dialysis arrangements (E1, E2), and

d) wherein said device includes current supplies (S) for the cathodes (Ka) and the anodes (An) of the first electro dialysis arrangement (E1) and of the second electro dialysis arrangement (E2); and

e) wherein the volume streams of fluid to be circulated between the electro dialysis arrangements and the collecting tanks on the one side and between the collecting tanks in the main cation exchangers on the other side are adjusted independently of each other.

Claim 36. (Currently amended) A method for regenerating an electroless metal plating bath, comprising:

- a) conducting the metal plating bath through the respective diluate compartments (Di1y, Di2y) of electro dialysis arrangements (E1,E2) and
- b) conducting a concentrate fluid, serving to adsorb interfering substances that are to be removed from the metal plating bath, through respective concentrate compartments

(Ko1y, Ko2y) of the electrodialysis arrangements (E1, E2), said concentrate compartments being separated from the diluate compartments (Di1y, Di2y) by ion exchange membranes,

c) moreover passing the concentrate fluid through main cation exchangers (I_x) and recirculating the fluid back into the concentrate compartments (Ko1y, Ko2y) by circulating the concentrate fluid in a first circuit between the concentrate compartments (Ko1y, Ko2y) and collecting tanks (V_k) and in a second circuit between the collecting tanks and the main cation exchangers (I_x),

d) wherein the metal plating bath is conducted through diluate compartments (Di1y) in a first electrodialysis arrangement (E1) comprising alternating concentrate compartments (Ko1y) and diluate compartments (Di1y) as well as cathodes (Ka) and anodes (An), the diluate compartments (Di1y) being each separated on the cathode side thereof from a neighboring concentrate compartment (Ko1y) by a monoselective cation exchange membrane (KS) and on the anode side thereof from a neighboring concentrate compartment (Ko1y) by an anion exchange membrane (A),

e) wherein the metal plating bath is conducted through diluate compartments (Di2y) in a second electrodialysis arrangement (E2) comprising alternating the diluate compartments (Di2y) and concentrate compartments (Ko2y) as well as cathodes (Ka) and anodes (An), the concentrate compartments (Ko2y) being each separated on the cathode side thereof from a neighboring diluate compartment (Di2y) by an anion exchange membrane (A) and on the anode side thereof from a neighboring diluate compartment (Di2y) by a monoselective anion exchange membrane (AS), and

f) wherein the metal plating bath is simultaneously conducted through all of the diluate compartments (Di1y, Di2y) in the two electrodialysis arrangements (E1, E2), the

arrangements being connected in parallel, and the concentrate fluid being conducted through all of the concentrate compartments (Ko1y, Ko2y) in the two electrodialysis equipments (E1, E2);

and

g) wherein the volume streams of fluid to be circulated between the electrodialysis arrangements and the collecting tanks on the one side and between the collecting tanks in the main cation exchangers on the other side are adjusted independently of each other.